

Notice of Allowability	Application No.	Applicant(s)	
	09/937,599	NAKAHAMA ET AL.	
	Examiner	Art Unit	
	Ling-Siu Choi	1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to the Amendment filed 07/06/04.
2. ☐ The allowed claim(s) is/are 10-18.
3. ☒ The drawings filed on 28 September 2001 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

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DETAILED ACTION

1. This Office Action is in response to the Amendment filed July 6, 2004. Claims 1-18 are now pending, wherein claims 1-9 were withdrawn from consideration due to the Restriction Requirement.

Examiner's Amendment

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CAR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Eugene Perez on August 19, 2004.

3. The application has been amended as follows:
Cancel claims 1-9 without prejudice and disclaimer.

Allowable Subject Matter

4. Claims 10-18 are allowed.

5. The following is an examiner's statement of reasons for allowance:

The present claims are allowable over the closest references: Nakashima et al. (US 4,076,220).

The present invention relates to a kneadning status **evaluation method** for a rubber composition containing a rubber and a filler, comprising the steps of

5	measuring	a complex viscosity coefficient (η^*) under at least two different temperatures
6	calculating	a kneading status monitor index (M) according to $ \eta^* = A \exp(-M/RT)$
7	comparing	the calculated kneading status monitoring index (M) with a predetermined target kneading status monitor index (P)

(summary of claim 10)

Nakashima et al. disclose a method of mixing and kneading control of a rubber kneader in order to achieve an uniform plasticity and dispersibility of the additive to enhance the quality of the individual finished tire, the method comprising the steps of detecting the plasticity of a raw material after the rubber raw material and additives are put into a receptacle of the rubber kneader and controlling total energy spent by the electric motor of the rubber kneader in correspondence with the detected plasticity of the rubber raw material (abstract; col. 1, lines 21-25). Nakashima et al. further disclose that the plasticity of the kneaded rubber is related to the total electric energy spent during the kneading and mixing operation by the equation of $ML = F_1(W, T)$, wherein ML denotes the plasticity of the kneading rubber; W total electric energy spent during the kneading and mixing operation; T temperature of the kneaded rubber

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during the kneading and mixing operation (col. 2, lines 66-68; col. 3, lines 1-7). It is noted that ML reads on viscosity coefficient; W kneading status monitor index; T measuring temperature. However, Nakashima et al. do not teach or fairly suggest a kneading status evaluation method comprising a kneading status monitor index calculation step using the specific function.

In light of the above discussion, it is evident as to why the present claims are patentable over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ling-Siu Choi whose telephone number is 571-272-1098.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached on 571-272-1114.



Ling-Siu Choi, Ph.D.

August 18, 2004